

New River Head, April 28, 1781.

S I R,

ACCORDING to your Request, I went to the Town of *Wells*, in *Norfolk*, and surveyed for a considerable Time, the Town, the Haven, the Channel leading from the Town to the Sea, the Bar at the Mouth of the Channel, the Land Marshes, the Sea Marshes, and the Walls or Embankments, and other Parts in the Neighbourhood of that Place.

Since then I have procured accurate Maps, made from real and actual Surveys, of all the Parts and Places abovementioned, for upwards of four Miles, along the Coast, at and near the Town.—This has been done in a very compleat and masterly Manner, by the ingenious Land-Surveyor, Mr. *Biederman*. The first and largest Map, exhibits the whole of what has been mentioned: and it points out by a yellow Colour, all the Lands which have been embanked at any Time heretofore; and from being Sea Marshes, have been converted into fresh Water Marshes, by a Wall or Mound of Earth being thrown up, which prevents the Sea Water (at the Time of Spring Tides) from flowing the same. It points out also, the Line to which the high Water flows at present, in the Time of Spring Tides; and also the Line which high Water, at the Time of Neap Tides, makes on the Coast; thereby exhibiting at one View, the Space of Ground which is *not covered* by the Tides, between the Springs and the Neaps; and the Quantity of Land or Ground which would be covered by the Spring Tides, if it was not for the Sea Walls or Mounds of Earth abovementioned.

This Map shews also, how much of the said embanked Lands belong to Mr. *Coke*, and what belongs to the Heirs of Sir *John Turner*, in so far, as this Map extends along the coast, near *Wells*, with this Exception, that the embanked Lands of Mr. *Coke* extend a great Deal further to the Westward, to a great Extent indeed.

A

The

The Channel, the Harbour, the Bar, the Pool, the Marram Hills, or Miels as they are called, and the several collateral Channels called Fleets, were also the particular Objects of this Map.

The second Map, of a lesser Size, but to a larger Scale, exhibits the Plan of the Town of *Wells*, that Part of the Harbour occupied by the Shipping, the Sea Marshes on the North East of the Town, cut by innumerable Channels; and particularly setting forth the Means which have been hitherto taken, by the Commissioners for the Haven, in constructing Works in the said Channels.

It also exhibits the Quantity of Lands belonging to the Heirs of Sir *John Turner*, on the East Side of the Town; and the Parcels of each respectively, when formed at different Periods of Time into fresh Water Marshes; and the various Means which were used and *altered* to prevent the Sea Water from flowing the same, which was for a few Tides at the Top of the Springs only.

In the Margin of that Map are set forth, the Parcels or Quantities of Land, classed in a particular Manner. And a Variety of Facts relating to the Harbour, Shipping, and Acts of the Commissioners abovementioned, are registered, and to which I beg Leave to refer You.

82. *Good*
Having ascertained the exact and present Situation of Things in these Places, and noted particularly the Face of the Country, the Line of the Coast in General, and the various Levels of the Face of the Lands, Marshes, Creeks, Sea Walls, Sluices, &c. I stated *the Question* which you have put to me, to wit,—Whether does the Embankment of the Marsh Lands, marked thus, (A, B, C, D, E, F, G, H, L, M,) containing about 64 Acres of Land, and about three Acres of Water, affect the Harbour of *Wells*, which Embankment was made in the Year 1758, in Addition to others in that Quarter done before that Period, amounting to 105 Acres of Land and Water?

Before I can make myself understood in what I have to report on this Occasion, I must beg your Attention to Things at a greater Distance.

The Town and Harbour of *Wells* is situate at the Extremity of the Coast of *Norfolk*, towards the North, and fronting full to that Point of the Compass. From thence, and all the intermediate Points between N.W. and N.E. the bad and blowing Weather falls very heavy on the Mouth of the
Harbour

This is false - all the evidence goes to show that the Indians could not go to
these great depths at any common spring tide - as they did not -

The whole of the evidence shows that the Indians could not go to
these great depths at any common spring tide - as they did not -

(2) This is false, — the 18th Ed. of Flood sets to the W. of the
first three hours and passes the Harbour and Northam Gap, and the
last three hours it turns and flows past Northam Gap in an E. S. E.
direction. —

50 — A fresh water spring into the N. side of the River, at a
short distance from the — (old) — (old) — (old) — (old) — (old) —
to show its accuracy. —

50 — This is false for all the techniques (branded) proved that burned in
flame and is paper and is in the same state now, in which it
always was — without any diminution or addition. —

Harbour. The navigable Part of its Channel lies directly North and South. The Tide of Flood proceeding along the East Coast of *England*, sets full in at *Holkham Gap*. When the Spring Tides are combined with a North-West Wind, the Sea swells to the highest; and if it blows hard, it rages with great Impetuosity; insomuch as to change and shift the then Situation of Sands, Creeks, Bar, &c. and in general, every Thing composed of light Matter, and of a moveable Nature.

The Line of Coast itself is high Land, even within no great Distance of the Sea; but there is a flat *Verge or Border*, all along the Coast, for many Miles to the Westward and Eastward of *Wells*. This *Verge or Border* is from three Quarters of a Mile, to two or three Miles in Breadth, and is never floated or covered with Sea Water, during all the Times of Neap Tides. The Sea makes its Appearance at these Times *only* in the Creeks or Inlets, of which there are, in this *Verge or Border*, a Number incomprehensible, branching out into Divisions and Subdivisions to Infinity. — The largest of these Creeks are termed *Fleets*, by Way of Eminence: and the largest of these latter serve as Harbours or Havens; and in Proportion to their Size and Safety, have been occupied and used as such. Fifty Miles of this Coast may literally come under this Description, having no River or Land Water of any Kind discharging themselves into the Sea. On the outer Part of this *Verge or Border* of Land, there are several Lines of Sand-Hills next the Sea, in detached Parcels, which in its Violence it has thrown up, and composed of Materials entirely from the Sea itself. *These*, forming a Chain of Protection, with Intervals or Gaps here and there, serve to protect this *Verge or Border* from the Ravages of Storms; and by a constant Addition and Accumulation of Sand, and fine Mud deposited on it, adds to the general Level of this Land, and insensibly raises its Surface higher.

When the Map of the Counties adjoining Westward, and the two great Estuaries of the *Humber*, and the Wash or *Lynn Deep*, are attentively considered; and the Nature of the Rivers *Ouse, Nean, Welland, Wytham, Trent, Wharfe*, and *Swale*, flowing through the flat and rich Soil of *Cambridgeshire*, *Huntingdonshire*, and *Lincolnshire*, &c. are known, it is not difficult to account for all that vast Quantity of Materials which have formed Flats and Sands in the Mouths of these Rivers, in the great Estuaries abovementioned. — This Circumstance has not only formed this *Verge or Border*, in Addition to the Coast of *Norfolk*, but has formed also great and extensive Sand Banks out at Sea; of which the *Burnham-flats* to the North-West, and the *Piper-sand* to the North-East of this Harbour, are very considerable.

able. It is a Combination of all these Circumstances, which forms this Part of the Coast in Question, and changes the Figure of its constituent Parts every Day. *This*, by slow and progressive Means, (imperceptible, however, at the Time, to human Observation) forms Land with Creeks, and as imperceptibly changes it, and fills the Inlets up. (2)

Of this Kind is the Harbour or Haven of *Wells*; which has not a Drop of back Water from the Land, to scour the Sediment which the Sea Water deposits in it, and in the Creeks that are its Dependencies. From the same Parent, which has formed it, it inherits all the Diseases belonging to such a Generation. Nor is this an uncommon Feature of Nature.—*Holland*, and the Lagunes of *Venice*, are rising, as it were, out of the Sea; imperceptibly in point of Observation, but most certainly in point of Fact.

The Inhabitants of the Town of *Wells*, and those interested in it as an Haven, must look to that Cause for all the Evils attending the Navigation of the Harbour, and the Communication with the open Sea.—It presses hard upon them, and will press on them much more so. They must follow the Sea in this Sort of Retreat which it makes; and reflect, it is perfectly useless to cast an Eye towards the Land. The Shore along the West Side of the Harbour ought to be raised, and that Part which is judiciously begun, ought to be extended towards the Pool and the Sea. The artless means of the two Sluices as they are called, constructed in 1738, and 1765, serve only to wash the Channel clean, at or near the Doors of the Inhabitants, as it were; but as to the Effect they have had, or that any of such Construction would have on the Channel from this Place, through the Pool to the open Sea, at the Bar or Entrance—Vain are the Expectations of those who think of deriving any substantial Benefit therefrom. (6)

The Alterations which have been noted to have happened in the Pool, and in different Parts of the navigable Channel, are certainly to be attributed to the general Pressure of that Cause which I have mentioned above. (8)

Malshod The Sea is embanking, of itself, the whole Coast; and the Time will probably come, when this Harbour will diminish to a Creek; and that again, by slow Degrees, to solid Land.

If all the Lands embanked by the *Turner's* Family, or their Predecessors, even in the remotest Time, were to be laid open, by throwing down the
Sea

2) - When the Jury are informed of causes, which are pre-occupied and
provided upon oath, it is hoped that they will not attend to causes which
are unpre-occupied and never existed, but in the mind of the Plaintiff - If
they did ever exist, how could they not to produce the effect complained of
between the Pool and the Sea after 158 -

3) - This is an imprudent Act of School - Detected by all disinterested parties, and
at length the Plaintiff will go in support of his Employer

4) - The Plaintiff might possibly project a better Scheme

5) - The Plaintiff of the Sea - involved if which it has actually
joined upon the Shore -

(a) The Waters from Warham Slade never did pass to Sea until the last Quarters Ebb, always passed thro' the Harbour and in no other course and had a scouring Effect throughout -

(b) Warham Slade contained one third of all the Backwaters in 1758. Not to mention that these Waters by reason of the situation of the Slade had a far greater Effect than the Waters from the Outwaters 3, 4, 5, but the Question is out of the Law.

(c) This is easily accounted for - The Silt brought up by the Sea hath of late years been lodged on the Outwaters for want of a sufficient Backwater to carry it on to Sea, by which means Warham Slade is become lower than the Marsh. N^o 5. But it is proved that before 1758 it was higher.

(d) Then there never could have been and never can be any loss in a fresh Water which the Dept. Witnesses say would have carried back all Sediment to Sea, as before 1758 -

(e) Warham Slade was before 1758 Common of Pasture for the use of the Inhabitants of Dees - Besides the property of land lying within the flur and reflux of the Sea was originally in the Crown and must there remain until a Title is gained by Sale, Gift or Prescription - The P^{rs} have no such Title they are entitled to a right of Sheepwalk and the Inhabitants of Dees to a Right of Common for great Cattle over the Slade - Subject to these Rights, the Marshes being the natural Reservoir of the River are the property of the King as Trustee for the Public -

Sea Walls or Mounds of Earth, I am clearly of Opinion it would make no Improvement to the Harbour, or the Channel; and therefore the having made them was no Detriment to the same. For the Surface of this embanked Land in Question, (small in its Quantity) is so very high with Respect to the navigable Channel, that the Water, which would cover the said Lands at high Water, during a few of the Spring Tides, would pass from off that Land to the open Sea, by the general Course cross the Verge or Border of Sea Marsh Land before there could be any considerable Stream created in the navigable Channel by the Tide of Ebb, sufficient at least to scour the Pool or Channel, of the Sands and Sediment which the Sea leaves at Times in it, as above stated.

In the whole, there are but 172 Acres of Land and Ditches within this Embankment; and the particular Quantity of that which is the Object of the Dispute, is but 64 Acres. It is like a Drop of Water to the Sea.—It would not have Power to remove THAT to the Sea, which the Sea of itself brings; and even if this Space was allowed to be filled by the Tide Waters, they too, being impregnated with their Proportion of the Evil, would ADD to, instead of diminish from the general Evils of this Harbour.

As a strong and obvious Proof of this Opinion, it is an incontrovertible Fact, that the Surface of the Sea Marsh Land, on the Outside of the Embankment, is at this Time higher in Point of Level, than the Lands of the fresh Marshes on the Inside, notwithstanding the no great Length of Time since this Embankment has been made. If it had not been embanked, it would have been higher Land at this Time, than it is; and the Sea would, by Degrees, have done of itself, by raising the Land up to its own highest Level, what has been anticipated by the artificial Means of this Embankment.—Nor is this Fact peculiar to this Parcel of Land, and to this Situation; for it is the same with Respect to all the Embankments, for Miles to the Westward of this Harbour; and the Land Owners or Proprietors of the Soil, have very justly and fairly, (in such Embankments as have been made by drawing Walls round the highest and most elevated of these Marsh Lands) excluded the Sea from floating, for a few Tides only once a Fortnight, Lands, that at all other Times than the Top of Spring Tides, are perfectly dry, and capable of Culture. In such a Case, it cannot be deemed wrong for any Proprietor to improve his own Estate (thereby adding to the general national Stock) if it does not annoy or disturb the Possession of others.—The making of this Embankment does not annoy the Harbour of Wells. Whatever may be said, or even proved, of Alterations

The Evidence from the History of the Harbour of Wells

a moment's rest.

tions for the worse, in the Navigation of the Channel, the Size and Depth of the Pool and the Bar, they must be owing to other Circumstances than that. I have assigned a Cause, and am confidently of Opinion, the Increase

of the Evils in *Wells* Harbour, is owing to the one, and not to the other.—

(1) If Reflection is had only for a Moment, that there are now no less than 1000 Acres of Sea Marshes, on the East Side of this Harbour, and 600 Acres on the West Side, besides Creeks, Fleets, and Inlets, equal to 150 Acres; and that there are only 64 Acres in this diminutive Embankment, it cannot have an Effect within the Power of Computation. The Figures

in red Ink shew the Depth of Water, which high Water makes on the Sea Marshes, generally; and that is only in Times of Spring Tides.—The

Sea is embanking the Whole, and filling up the Creeks, by the Deposition of a Sediment which it brings suspended in its Water.—This Sediment is

again disturbed by subsequent Storms, and the heavy Particles are washed into the Channel; and forming here and there small Ledges and Sand

Banks, alter and twist the Course of the navigable Channel, which is no less than three Miles in Length, from the Quay to the Bar.—Mr. *Beiderman*

observes, and I join him clearly in the Observation, that by the Storms

which burst with the Flood Tide, through Holkham Gap, (an Opening in the *Marram* Hills, or Sand Hills above-mentioned) much of the ~~Sand~~ which

annoys the Channel comes from that Quarter on the North West.—In like

Manner, from the North-East, vast Quantities of Sand are forced from the

Piper Sand by Storms over the Coast, to the East of Lodge Marsh, and breaking into a deep Pool called the *Broad-arfe*, is conducted down the East

Fleet, directly to the Pool, and from thence, by Degrees, to the Bar.—

These are obvious Lines in the Features of *Wells* Harbour; and so far from the Embankments being any Part of the Cause of the Evils complained of,

that if I was consulted by the Commissioners for the general Good of the Harbour, I would advise more of them to be continued towards the Sea,

down both Sides of the Harbour and Channel. The Sluices which have

been built, have helped to lead the Judgement of Men wrong in their real

Effect. By their being only a Contraction of the Mouth of the Creeks, and not a Stopgate to retain a back Water to a full Head, before it is let

off,—they have served only to wash the upper Part of the Harbour clean,

but tend nothing towards clearing three Miles in Extent of the Channel, the

Pool, and the Bar, of the Lodgment of Sand in each respectively.

I am conscious I have said more on the Nature and Qualities of this Harbour, than of Sir *John Turner's* Embankments; but in doing so, I be-

lieve, and trust it will now be found, that the Evils which exist in the Navigation

(B)

which is the
thing you should
attend to

Without any great exertions of this Power of Calculation, every one knows that 1550
1057 just as the Inimities is really as 26 to 1. In other words the same damage
which might have been effected in one year will require 26 to complete. But this is
a fallacious mode of calculating - for the Effect of the Water on these 1550 Acres from their
situation is not to be compared with that of the Slade 6 Acres, since the Water did not re-
cede from the Slade till all the surface Water was ebbed away, and consequently every
Drop of it acted with the Seawing force on the Timber. Suppose this (even as Mr. Inert
allows p. 13) to be the Case but four times in a year, then that each time it removes
for to four times as much as it retards the accumulation of one Inch of Silt in
the Pool only, this in 21 years will produce an Effect equal to 10 feet. People are seldom
aware of the prodigious Effects arising from a frequent repetition or a long continuance
of apparently small causes.

The Determination of thus much per cleared business, might rest on the re-
sponses to the following Queries.

1st - Must the Slade ever be flooded four times in a year?

2nd - Did not the Slade Water keep back till half Ebb - or till the surface Water was
16 ft off?

3rd - Must not this Water which is covered by Stones retain a fluid space not more than
43 fms wide?

4th - Would not these two last circumstances confine all this Water to the Channel only

5th - Would this Water so confined produce any effect in Seawing or preserving
any part of the Harbour?

3rd - It is false - The East End of what he calls Broadwise or the Great East Fleet -
are dry at the first two hours Ebb, and no Wind can possibly come that way into the
Pool -

If Mr. Mylne testifies the fact of the Retreat of the Sea, upon which is whole Rep-
ounded, he will be perjured -

gation of this Port, cannot be attributed to the latter, while they are so evidently owing to another Cause, of far greater Weight and Importance. And that the little Works of human Industry have small Tendency to counteract or divert great Operations of Nature, from that Line of Effect which is too often thought not to exist, because it is not perceptibly obvious to the Senses of every Person.—Human Nature is too apt to form Systems and draw Conclusions, without sufficient Observations and Scrutiny. Too often the Search is made for an Evil in our Neighbour's Property, when, perhaps, it is to be found at Home. *This is strictly applicable to Mr Mylne -*

The Facts herein stated, I am ready to testify when required; and the Deductions made from them, I hope will be found to be well founded in the Opinions of impartial Men; at least I have not the least Hesitation to avow them as the fixed Sentiments of,

S I R,

Your most humble, and very obedient Servant,

ROBERT MYLNE.

To JOHN FORSTER, Esq;

APRIL 28, 1781.

Mr. MYLNE'S REPORT,

ON HIS

SURVEY of the HARBOUR, &c.

of WELLS, in NORFOLK.

26 MR 50

